

ABSTRACT

RADIOTHERAPY APPARATUS AND OPERATING METHOD

A radiotherapy apparatus comprises a source of therapeutic radiation, a source of imaging radiation and a two-dimensional imager for the imaging radiation, a computing means for preparing tomography data from the output of the imager, the therapeutic source being controllable on the basis of feedback from the tomography data, wherein the computing means is arranged to prepare a plurality of intersecting sectional views from the output of the imager, akin to a portal image but with better contrast and the detail of a section rather than that of a projection. This is easier to interpret and visualise a series of sectional than a three dimensional view. Pixels of the images are the result of averaging a plurality of voxels arranged transverse to the section, typically orthogonal and linear. Typically, good results can be achieved using between 5 and 20 voxels. About 10 is suitable, ie between 7 and 15. There is ideally a display means for showing the sectional views to an operator. The therapeutic source can then be controlled on the basis of instructions from the operator, given via an input means such as a mouse or other pointer, which is preferably correlated to the display. This correlation can be via a superimposed image on the display which is moveable in response to operation of the input means. The superimposed image can derived from one of a previous investigation and a treatment of the patient, so that it corresponds in shape to the area or the image which is being sought. The superimposed image is preferably an outline so that the underlying image is clear.

(Fig 3)